

At first, I made histogram of [momentum vs $t_{\text{tof}} - t(\text{pion})$] using your offsets.

I think that the details of your offsets are as follows.

- (run_number < 228341)

$$t_{\text{tof}} = t_{\text{tof}} + 6.33$$

- (slat by slat)

You divided some groups by run number, and slat by slat offsets are decided in the groups.

```
if(irun==227) fin.open("/phenix/hp/data10/arkadij/pid/libt0/calib/T0strip227.txt");
```

```
if(irun==228) fin.open("/phenix/hp/data10/arkadij/pid/libt0/calib/T0strip228.txt");
```

```
. . . .
```

```
if(irun==240) fin.open("/phenix/hp/data10/arkadij/pid/libt0/calib/T0strip240.txt");
```

- (run by run)

Run by run offsets are decided by 2 groups

These groups are (slat number < 768) and (slat number \geq 768).

This file address is

/phenix/hp/data10/arkadij/pid/libt0/T0East.txt

Is this OK?

This program is

`/direct/phenix+u/workarea/hamada/calibration_2008_5/Arkadij/global_kakunin_3_27_final.C`

I used Tof Tree that made by Train 95 as data file.

This address is below.

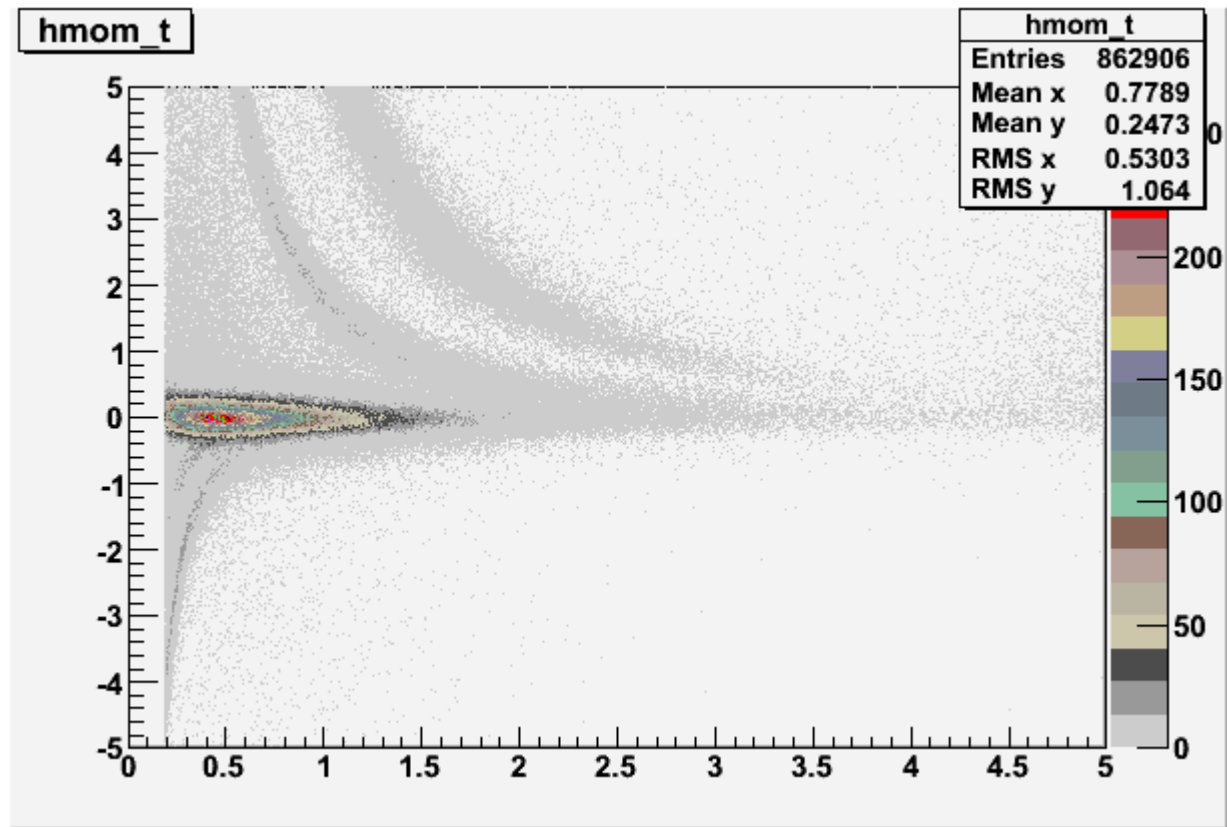
`/phenix/gh/data07/hamada/tof_calibration/run7AuAu200GeV/TofTree_2008_4_7/TofCalibMakeTree__anatrain_taxi95/data/`

As above, I made histgroam of [momentum vs $t_{\text{tof}} - t(\text{pion})$].

The result is the following address.

`/direct/phenix+subsys+tof/hamada/tofoutput_2008_5_18/Arkadij2`

In this, histgroam of [momentum vs $t_{\text{tof}} - t(\text{pion})$] is `hmom_t`.



(run number = 236521)

x axis is momentum.

Y axis is $t_{\text{tof}} - t(\text{pion})$.

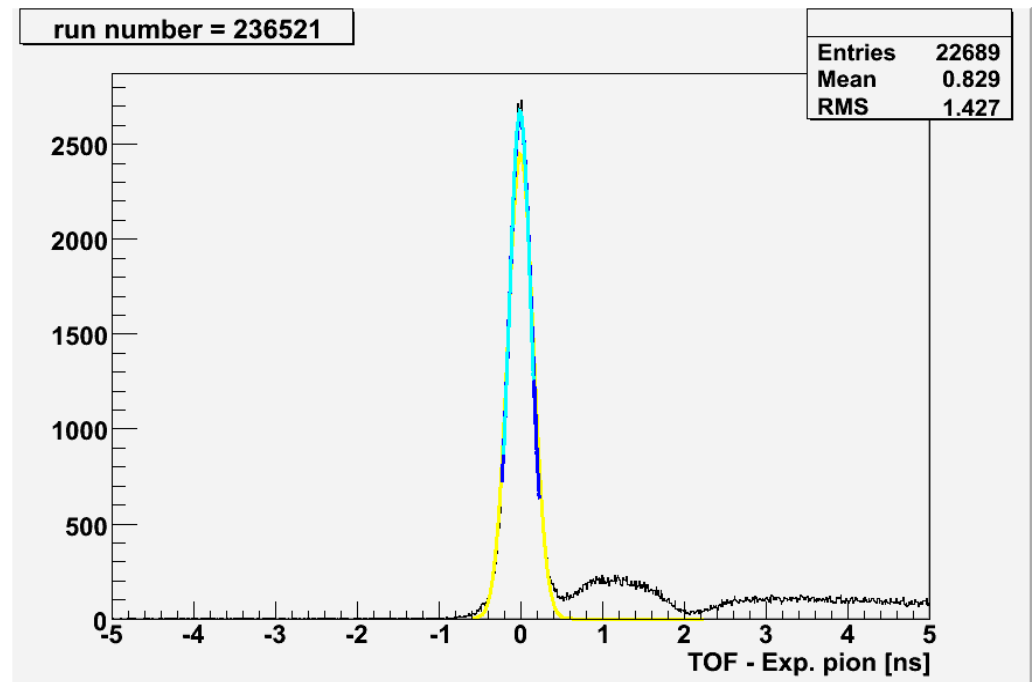
I projected it ($\text{mom} > 1.0$ & $\text{mom} < 1.7$), and

I did several times gaus fit .

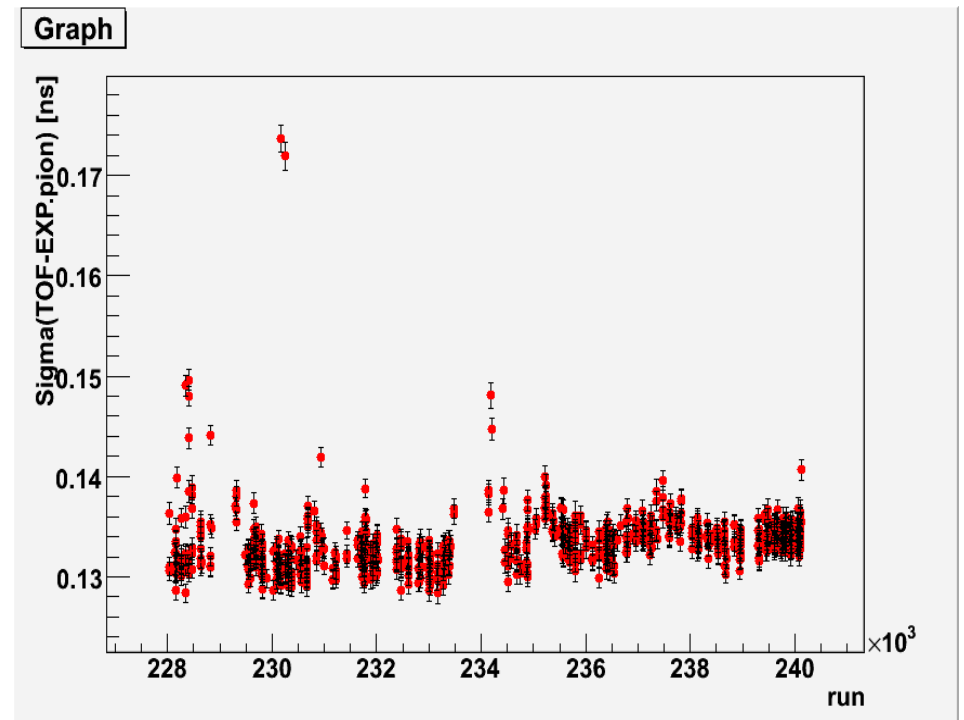
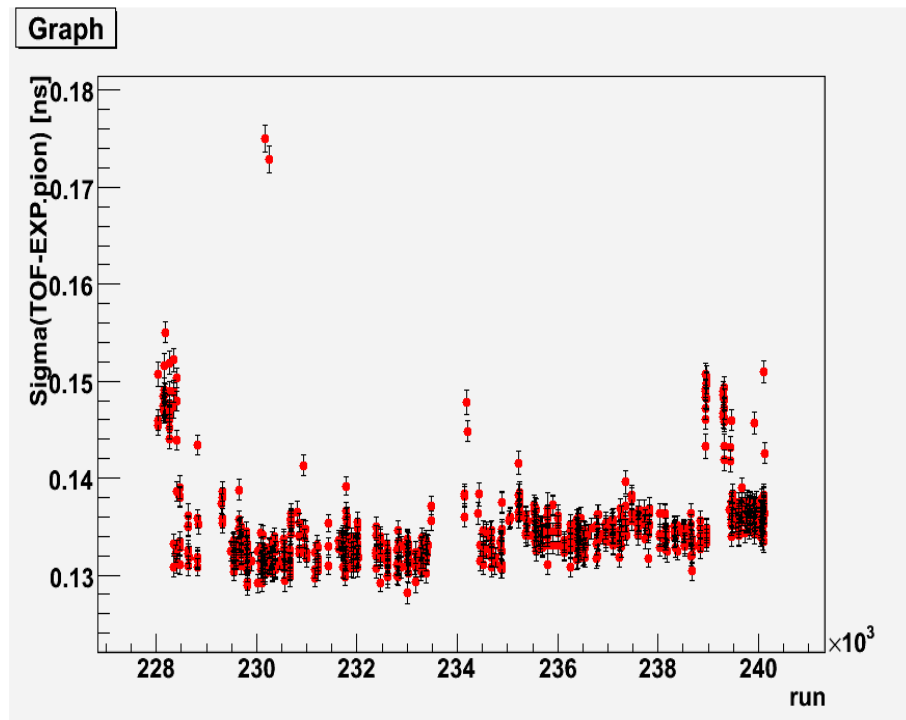
Finally, the range is ($-1.5 * \text{sigma} + \text{mean}$, $1.2 * \text{sigma} + \text{mean}$) .

Right figure is

- histogram of
tof-t(pion) ($\text{mom} > 1.0$ & $\text{mom} < 1.7$)
- Run number = 236521
- Light blue is last gaus fitting.



I did the above, and estimated sigma for all runs.



X axis is runID. Y axis is resolution.
Left is by your offsets.
Right is by my offsets.

You can see that these are hardly change.

I made resolution for all run by using your offsets.

But, most of them are $130 \sim 135$, and hardly change with mine.

Maybe, when I estimate resolution, the way is not yours.

So, Please tell me how to estimate resolution.

Is this only gaus fit?